

Appl. No. 10/810,977
Dated: June 10, 2005
Reply to Office Action of March 10, 2005

Appendix A

[illegible]

BRR
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Relation Type, if applicable

L C P D (circle one)DOCKET NO.: 15105.1 ATTORNEY: BRRAPPLICANT(S): Jian-Qin et al.Title: PERMANENTLY WETTABLE SUPERABSORBENTSPATENT APPLICATION TRANSMITTAL XFEE TRANSMITTAL X

16 PAGES OF SPECIFICATION (including 1 Abstract page)

4 PAGES OF CLAIMS

0 PAGES OF DRAWINGS

COMBINED DECLARATION & POWER ☐ASSIGNMENT ☐PTO FORM 1595 RECORDATION COVER SHEET ☐INFORMATION DISCLOSURE STATEMENT & PTO FORM 1449 ☐PRELIMINARY AMENDMENT ☒☒ Photocopy of Combined Declaration & Power from 09/531,247

The stamp of the U.S. Patent and Trademark Office hereon indicates receipt of the above application for Letters Patent.

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In the United States Patent and Trademark Office

Applicants:	Jian Qin et al.	Docket	15105.1
Serial No.:	Unknown	T.C./A.U.:	Unknown
Confirmation No:	Unknown	Examiner:	Unknown
Filed:	Herewith	Date:	March 25, 2004

For: PERMANENTLY WETTABLE
SUPERABSORBENT FIBERS

Preliminary Amendment

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. § 1.115, it is respectfully requested that the Examiner preliminarily amend the specification and claims of the instant application as indicated below.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendments to the Specification:

Please add the following new paragraph after the title "PERMANENTLY WETTABLE SUPERABSORBENTS" and prior to the section subtitle "Technical Field" on line 9 of page 1:

This application is a divisional of application serial number 09/531,247 entitled Permanently Wettable Superabsorbents and filed in the U.S. Patent and Trademark Office on March 21, 2000. The entirety of application serial number 09/531,247 is hereby incorporated by reference.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claims 1-21 (canceled).

Claim 22 (new): A permanently wettable superabsorbent material made by the method comprising:

treating a superabsorbent material with a surfactant in a surfactant solution;

wherein said surfactant has at least one first functional group reactive with a second functional group of said superabsorbent material and at least one non-reactive and hydrophilic functional group; and

wherein said surfactant is applied to said superabsorbent material when said second functional groups on a surface of said superabsorbent material are activated.

Claim 23 (new): The permanently wettable superabsorbent material of claim 22 wherein said superabsorbent material is selected from the group consisting of fibers, particulates, films, nonwovens, beads, foams, and coforms.

Claim 24 (new): The permanently wettable superabsorbent material of claim 22 wherein said surfactant solution includes a solvent to said surfactant but a non-solvent to said superabsorbent material; and

wherein said surfactant solution includes an amount of water sufficient to activate said surface of said superabsorbent material to promote reaction between said first and said second functional groups on said surface of said superabsorbent material.

Claim 25 (new): The permanently wettable superabsorbent material of claim 22 wherein said superabsorbent material has a floating time less than 30 seconds.

Claim 26 (new): The permanently wettable superabsorbent material of claim 22 wherein said permanently wettable superabsorbent material has a reduction in surface tension of saline less than about 30% when compared to an untreated superabsorbent material.

Claim 27 (new): The permanently wettable superabsorbent material of claim 22 wherein said superabsorbent material is selected from the group consisting of alkali metal salts of polyacrylic acids, polyacrylamides, polyvinyl alcohol, ethylene maleic anhydride copolymers, polyvinyl ethers, hydroxypropylcellulose, polyvinylmorpholinone, and polymers and copolymers of vinyl sulfonic acid, polyacrylates, polyacrylamides, polyvinyl amines, polyallyl amines, and polyvinylpyridine.

Claim 28 (new): The permanently wettable superabsorbent material of claim 22 wherein said superabsorbent material is selected from the group consisting of agar, algin, carrageenan, starch, pectin, guar gum, chitosan, and the like, modified natural materials such as carboxyalkyl cellulose, methyl cellulose, hydroxyalkyl cellulose, chitosan salt, dextran, and the like.

Claim 29 (new): The permanently wettable superabsorbent material of claim 22 wherein said surfactant first reactive functional group is selected from the group consisting of quaternary ammonium groups, amino groups, carboxyl groups, sulfonate groups, phosphate groups, and their corresponding acid groups.

Claim 30 (new): The permanently wettable superabsorbent material of claim 24 wherein said solvent is selected from the group consisting of isopropanol, methanol, ethanol, butyl alcohol, butanediol, butanetriol, butanone, acetone, ethylene glycol, propylene glycol, glycerol, and mixtures thereof.

Claim 31 (new): The permanently wettable superabsorbent material of claim 24 wherein said water is present from about 1 to 10% by total weight of the solvent.

Claim 32 (new): The permanently wettable superabsorbent material of claim 22 wherein said surfactant is applied to said superabsorbent material when said surface of said superabsorbent material is sufficiently solvated to promote reaction between said first and said second functional groups on the surface of said superabsorbent material.

Claim 33 (new): A disposable absorbent product comprising a liquid-permeable topsheet, a backsheet attached to the topsheet, and an absorbent structure comprising the permanently wettable superabsorbent material of claim 22 positioned between the topsheet and the backsheet.

Claim 34 (new): A permanently wettable superabsorbent fiber made by the method comprising:

treating a superabsorbent fiber with a surfactant solution; and

binding said surfactant to a surface of said superabsorbent fiber;

wherein said surfactant comprises at least one first functional group reactive with at least a second functional group of said surface of said superabsorbent fiber, and at least one non-reactive and hydrophilic functional group on said surface of said superabsorbent fiber; and

wherein said surfactant is applied to said superabsorbent fiber when said surface is activated by increasing an amount of said at least a second functional group available to react at said surface of said superabsorbent fiber.

Claim 35 (new): The permanently wettable superabsorbent fiber of claim 34 having a reduction in surface tension of saline less than about 30%.

Claim 36 (new): A disposable absorbent product comprising a liquid-permeable topsheet, a backsheet attached to said topsheet, and an absorbent structure comprising the permanently wettable superabsorbent fiber of claim 34 positioned between the topsheet and the backsheet.

Claim 37 (new): A permanently wettable superabsorbent particle made by the method comprising:

treating a superabsorbent particle with a surfactant solution; and

binding said surfactant to a surface of said superabsorbent particle;

wherein said surfactant comprises at least one first functional group reactive with at least a second functional group of said surface of said superabsorbent particle, and at least one non-reactive and hydrophilic functional group on said surface of said superabsorbent particle; and

wherein said surfactant is applied to said superabsorbent particle when said surface is activated by increasing an amount of said at least a second functional group available to react at said surface of said superabsorbent particle.

Claim 38 (new): The permanently wettable superabsorbent particle of claim 37 having a reduction in surface tension of saline less than about 30%.

Claim 39 (new): A disposable absorbent product comprising a liquid-permeable topsheet, a backsheet attached to said topsheet, and an absorbent structure comprising the permanently wettable superabsorbent particle of claim 37 positioned between the topsheet and the backsheet.

REMARKS/ARGUMENTS

Claims 22-39 are presented for the Examiner's consideration. Claims 22-39 are new. Claims 1-21 have been canceled.

Support for new independent claim 22 is found in originally filed claims 1 and 8.

Support for new claim 23 is found in originally filed claim 7 and at page 3, lines 23-26 of the specification.

Support for new claim 24 is found in originally filed claim 2 and at page 5, lines 1-19 of the specification.

Support for new claim 25 is found in originally filed claims 10 and 19, and in the specification, for example at page 2, lines 19-22.

Support for new claim 26 is found in originally filed claim 10, and in the specification, for example at page 2, lines 19-28. Support for claim 27 is found in originally filed claim 13.

Support for new claim 28 is found in originally filed claim 14.

Support for new claim 29 is found in originally filed claim 15.

Support for new claim 30 is found in originally filed claim 17.

Support for new claim 31 is found in originally filed claim 18.

Support for new claim 32 is found in originally filed claim 21 and in the specification at page 6, lines 1-14.

Support for new claim 33 is found in originally filed claim 20.

Support for new independent claim 34 is found in originally filed claims 1 and 8, and in the specification, for example at page 4, lines 20-29 and page 5 lines 1-19.

Support for new claim 35 is found in originally filed claim 9.

Support for new claim 36 is found in originally filed claim 20.

Support for new claim new independent 37 is found in originally filed claims 1 and 8, and in the specification, for example at page 3, lines 22-26; page 4, lines 20-29 and page 5 lines 1-19.

Support for new claim 38 is found in originally filed claim 9.

Support for new claim 39 is found in originally filed claim 20.

Please charge any prosecutorial fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at:

Respectfully submitted,

JIAN QIN ET AL.

By: 

Bryan R. Rosiejka

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CERTIFICATE OF EXPRESS MAILING

I, Judith M. Anderson, hereby certify that on March 25, 2004 this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office To Addressee" service under 37 CFR 1.10 on the date indicated above with an "Express Mail" Mailing Label Number of ET 878518625 US and is addressed to Mail Stop Non-Fee Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By: 

Judith M. Anderson